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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,718	04/02/2004	Georg Wittmann	12406-062001	1015
26181	7590	08/16/2006	EXAMINER	
FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			LE, THAO X	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/816,718	Applicant(s) WITTMANN ET AL.	
	Examiner Thao X. Le	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 17-35 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 June 2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 27, 31-32 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to disclose "a first flexible multilayer packaging material having active polymer barrier a ceramic layer.... The substrate comprises an assembly at least one active polymeric barrier layer... the substrate having a first surface and a second surface, the first surface being

loser to the functional area than the second surface and the second surface comprising a ceramic layer”.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 17-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7074501 to Czeremuszkin et al. in view of US 5312689 to Dasher et al. or US 6710542 to Chun et al.

Regarding claims 17 and 30, Czeremuszkin discloses an organic electronic device that has one or more components 70 in fig. 8 that are sensitive to moisture or oxidizing agents, comprising: a flexible substrate 12, col. 13 line 15; a functional area

70, col. 13 line 43, on the substrate 12 comprising one or more active organic elements 70; a cap 22 encapsulating the organic functional area 70; and a first flexible multilayer packaging material 500, having a first active polymeric barrier layer 16 that binds moisture and oxidizing agents, and a ceramic barrier layer 14; wherein the first flexible multilayer packaging material 600 protects the functional area 70.

But Czeremuszkina does not disclose the organic electric device wherein the first active polymer barrier 16 includes a material comprising polymeric matrix with anhydrides and wherein the anhydrides are acid anhydrides of organic acids.

However, Dasher discloses an active polymer barrier 22, col. 5 line 16, includes one or more material from the group consisting of a polymer matrix with anhydride and wherein the anhydrides are acid anhydrides of organic acids, col. 3 lines 30-35. Furthermore, Chun discloses in fig. 2 an active OLED device 20 comprises active organic element 13; a first active polymer barrier 21 includes a material comprising polymeric matrix with anhydrides, col. 4 line 12, a ceramic layer 22 (silicon nitride), claim 1. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to replace the polymer matrix with anhydride teaching of Dasher with Czeremuszkina's polymer layer, because it would have prevented migrating matter by Dasher, col. 3 lines 24-28. Or it would have created a substrate that is impermeable to water and oxygen as taught by Chun, see abstract.

Regarding claim 18, Czeremuszkin discloses the organic electronic device wherein: the first flexible multilayer packaging material 500 is arranged between the functional area 70 and the flexible substrate 12, fig. 8.

Regarding claim 19, Czeremuszkin discloses the organic electronic device wherein the cap 22 comprises the first flexible multilayer packaging material 500.

Regarding claims 20, 24, Czeremuszkin discloses the organic electronic device wherein the cap comprises a second flexible multilayer packaging material 600 comprising: at least one ceramic barrier layer 24; and at least one active polymeric barrier layer 26 that binds the moisture and oxidizing agents.

But Czeremuszkin does not disclose the at least one active polymeric barrier layer of the second flexible multilayer packaging material includes one or more materials from the group consisting of a polymeric matrix with dispersed cyclodextrines and a polymeric matrix with anhydrides.

However, Dasher discloses an active polymer barrier 22, col. 5 line 16, includes one or more material from the group consisting of a polymer matrix with anhydride. Furthermore, Chun discloses in fig. 2 an active OLED device 20 comprises active organic element 13, a first active polymer barrier 21 includes a material comprising polymeric matrix with anhydrides, col. 4 line 12, a ceramic layer 22 (silicon nitride), claim 1. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to replace the polymer matrix with anhydride teaching of Dasher with Czeremuszkin's polymer layer, because it would have prevented migrating matter by Dasher, col. 3 lines 24-28. Or it would

have created a substrate that is impermeable to water and oxygen as taught by Chun, see abstract.

Regarding claims 21, 22, Czeremuszkin discloses the organic electronic device wherein: the cap 22 includes one or more materials from the group consisting of polymers, metals and glass, fig. 8, wherein the flexible substrate 12 comprises a polymer.

Regarding claim 23, Czeremuszkin discloses the organic electronic device wherein the cap 22 comprises a second flexible multilayer packaging material 600 comprising: at least one active polymeric barrier layer 26 that binds the moisture and oxidizing agents; and at least one ceramic barrier layer 24, fig. 8.

Regarding claim 25, Czeremuszkin discloses the organic electronic device wherein: the flexible substrate 110 includes a second active polymeric barrier layer 14, fig. 8.

Regarding claim 26, Czeremuszkin discloses the organic electronic device wherein the flexible substrate 12 comprises an assembly of active polymeric barrier layers 16 and ceramic barrier layers 14.

Regarding claim 28, Czeremuszkin disclose the organic electronic device wherein the one or more active organic elements comprises at least one stack having a first electrically conductive layer 66, an organic functional layer 62 on the first conductive layer 66 and a second electrically conductive layer 60 on the organic functional layer 62; and the organic functional layer comprises at least one organic electroluminescent layer, col. 13 line 23-31.

Regarding claim 29, Czeremuszkin discloses the organic electronic device wherein the one or more active organic elements 70 includes at least one stack comprising a first electrically conductive layer 66, an organic functional layer 62 on the first conductive layer 66 and a second electrically conductive layer 60 on the organic functional layer 62; and the functional area 70 comprises at least one organic radiation detecting layer forming an organic radiation sensor 64, column 13 lines 23-31.

7. Claim 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6624568 to Czeremuszkin in view of US 5587233 to König et al. or US 6333103 to Ishii et al.

Regarding claims 33 and 35, Czeremuszkin discloses an organic electronic device in fig. 5 that has one or more components in fig. 1 that are sensitive to moisture or oxidizing agents, comprising: a flexible substrate 110; a functional area 140 on the substrate 110 comprising one or more active organic elements 140; a cap 151d encapsulating the organic functional area 140; and a first flexible multilayer packaging material 150 that binds moisture and oxidizing agents via chem.- or physisorption, and a ceramic barrier layer 152a; wherein the first flexible multilayer packaging material 120 protects the functional area 140; and the substrate 110 comprises an assembly of at least one active polymer barrier layer 121c and at least two adjacent first and second ceramic barrier layer 122a/122b that are in direct contact with each other, the first and second ceramic barrier layers having the same composition (aluminum oxide).

But, Czeremuszkin does not disclose the device wherein the first and second ceramic barrier layers having the same composition but exhibiting different microstructures or α -Al₂O₃ and γ -Al₂O₃.

However, König discloses a ceramic layer consists of α -Al₂O₃ and γ -Al₂O₃, col. 2 line 47, and Ishii also discloses a ceramic layer comprises a mixture of α -Al₂O₃ and γ -Al₂O₃, col. 8 line 24-27. At the time the invention was made; it would have been obvious to one of ordinary skill in the art to use the α -Al₂O₃ and γ -Al₂O₃ teaching of either König or Ishii to replace the ceramic layer of Czeremuszkin, because it would have improved the wear resistance and durability as taught by Ishii in col. 1 lines 4-7 and König in col. 2 lines 32-34.

Response to Arguments

8. Applicant's arguments with respect to claims 17-29 have been considered but are moot in view of the new ground(s) of rejection.
9. With respect to Dasher, the Applicant argues that
 - a. Dasher does not bind moisture and oxidizing agents this is not persuasive because the material discloses by Dasher is substantially identical to that of the claims, claimed properties or functions are presumed to be inherent or obviousness has been established. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and MPEP 2112.01. Furthermore, something that is old does not become patentable upon the discovery of a new property. The claiming of a new use, new function or unknown property, which is inherently present in the prior art does not

necessarily make the claim patent-able. MPEP 2112. In addition, it is not necessary in order to establish a prima facie case of obviousness... that there be a suggestion or expectation from the prior art that the claimed invention will have the same or a similar utility as one newly discovered by the applicant *In re Dillon*, 919 F.2d at 692, 16 USPQ2d at 1900. Thus, it is not necessary that the prior art suggest the combination to achieve the same advantage or results discovered by applicant. See MPEP § 2144.

b. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

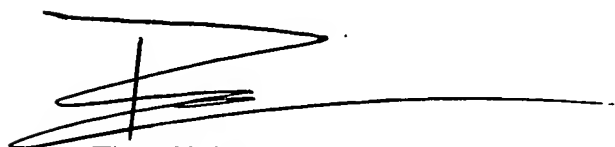
c. Non-analogous art: a prior art reference is analogous if the reference is in field of applicant's endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). In this case, Dasher and the instant applicant are trying to solve the same problem.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'Thao X. Le', with a long horizontal line extending to the right.

Thao X. Le
08 Aug. 2006